Discussion
Discussion

Diagnostic laparoscopy or peritoneoscopy is a good technique to establish the diagnosis in non-acute abdominal conditions. Laparoscopy provides a direct and better view of anatomy of intra-abdominal organs, lesser operative mortality and morbidity, a short hospital stay, acceptability to patient from the point of view of cosmesis and early return to work, all these qualities make laparoscopy superior to other routine scanning investigations. Due to these qualities and under vision biopsy, as well as therapeutic intervention like adhesiolysis all make laparoscopy also a good substitute to laparotomy, to establish the diagnosis in obscure intra-abdominal conditions. Further it can be converted to laparotomy if needed, at any stage of operation.

Patient with chronic or recurrent abdominal pain with or without a history of previous surgery, with or without intestinal obstruction symptoms are being given prolonged medical therapy without a clear-cut diagnosis. Ultrasonography and X-ray abdomen are usually inconclusive of diagnosis in these patients.

In our study twelve patients have undergone laparoscopy for non-acute abdominal conditions. The study included 12 patients of non-acute abdominal conditions. Of these twelve patients the age ranged from 6 – 60 years. Most of the patients occurred in the second and third decades of life (mean age of patient was 22.75 years).

Male : Female ratio was 1:5, there were 2 males (16.9%) and 10 females (83.3%) in the study group.

We carried out laparoscopic evaluation both under general anesthesia (7 patients, 58.3%) as well as under spinal anesthesia (5 patients, 41.7%). General anesthesia was the most preferred anesthesia in our study.

Laparoscopy established the diagnosis in all patients (100%). In three out of twelve patients (25%), SAIO due to Band and Adhesions
were noted. Adhesiolysis and bands removal was done during the same procedure. All three patients were available in the follow up of 2-10 months. In our study, out of three patients two patients (66.%) had no pain, and one patient (33%) had significant amelioration in their pain. Lavonius et al, found in their study of 46 patients of chronic abdominal conditions that adhesions were found in twenty nine patients (63.04%), adhesiolysis was carried out in twenty four patients (52.7%). Twenty one patients (89%) could be contacted for follow up during a mean time of nineteen months. Eighteen patients (77%) who had undergone adhesiolysis considered the results good or beneficial, no major complication were noted. He found laparoscopy to be a safe and useful procedure in the diagnosis of chronic abdominal conditions. Our study is in complete agreement with Lavonius study. In our study four out of twelve patients (33.3%) were diagnosed as Koch’s Abdomen (ileocecal tuberculosis, mesenteric lymphadenopathy, adhesions), ATT was given to all four patients. All four patients were available in the follow up of 6 – 12 months, and found good response to antitubercular therapy.

A detailed study of role of laparoscopy in chronic abdominal conditions was done by Millar K et al. Their results are also similar to the present study. Only five out of fifty nine (8.5%) patients had no improvement in their pain in follow up. In rest of the cases laparoscopy was successful in diagnosis.

In another study done by Schistroma M et al, in forty one patients, laparoscopy was found to be an efficient tool for the evaluation of patient with chronic abdominal conditions and laparoscopic adhesiolysis cured or ameliorated chronic abdominal pain in more than 80% of the patients. Our study agrees with Schistroma’s study. Conclusions are also similar of Custe Raza et al, Chao K et al, Wipfl – Funke A. et al and Yu Sy et al.

Malanghlin S et al, documented three diagnosed cases of abdominal tuberculosis over twelve months period. If patient present
with diffuse abdominal symptoms, the diagnosis of abdominal tuberculosis, should always be considered. Laparoscopy should replace diagnostic laparotomy as a definite diagnostic tool. Bauma BJ et al, reported that abdominal tuberculosis is often diagnosed in a late stage, because symptoms are aspecific. Two patients with intestinal tuberculosis and tuberculous peritonitis respectively, both from endemic countries presented with long standing fever, abdominal pain and weight loss. Acid fast bacilli were present in aspirate and biopsy specimens obtained by colonoscopy and laparoscopy respectively. PCR was positive for M.tuberculosis complex and later M.tuberculosis was cultured. Both patients responded to antitubercular therapy.

So, the conclusions of our study are similar to study of Bronstein JA et al, Malanghlin S. et al and Bauma BJ et al.

In our study three out of twelve patients of non-acute abdominal conditions (25%) were also diagnosed as recurrent appendicitis and one as non-Hodgkin lymphoma (8.3%) and another one as a Gall-bladder carcinoma (8.3%).

Ultrasound and X-ray abdomen can detect the cause of non-acute abdominal conditions. Many times, however, the presentation is non-specific and these scanning devices fail to diagnose. In our study USG diagnosed five out of twelve patients (41.7%). In rest of the patients USG was normal. Laparoscopy and histopathology of tissue material significantly confirms the diagnosis, as also suggested by Bronstein JA et al.

None of our patients needed laparotomy. We observed following advantages of laparoscopy over laparotomy.

1. Less tissue dissection and disruption of tissue planes.
2. Less post-operative pain.
3. Less post-operative ileus.
4. Less post-operative pulmonary complications.
5. Quick recovery.
7. Less need of IV antibiotics.
8. Better visualization of paracolic gutters and pelvic cavity, which is not possible by diagnostic laparotomy.
9. Less peritoneal mesothelial cell ischemic damage from trauma, drying, talc, packs and delayed bleeding. So less chance of post-operative adhesions formation.
11. Excellent cosmesis and patient acceptability.

Although in comparison to ultrasonography and X-ray abdomen, laparoscopy is an invasive modality, but it can visualize the lesions of peritoneal and visceral surfaces even less than 1 cm. Biopsy can be taken under vision and after ascertaining the consistency of lesion. It can visualize adhesions. These advantages make it superior to ultrasonography and X-ray abdomen.

Laparoscopic examination was completed satisfactorily in all 12 patients. The median procedure time was 23 minutes. There was no morbidity and mortality instance in this series.

The results of our study are in confirmation with results as quoted in literatures (17, 18, 20, 28, 29, 30). Studies involving more number of cases are needed in order to get a better statistical data.